



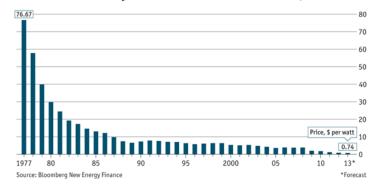
Scaling Solar:

A World Bank Group solution to rapidly expand private investment in utility-scale solar PV

The Solar opportunity is there to be taken advantage of

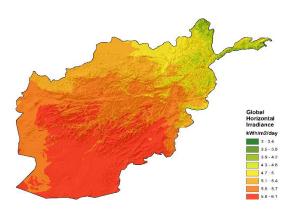
The economics of utility-scale solar PV power have reached a tipping point...

Price of crystalline silicon PV cells, \$/W



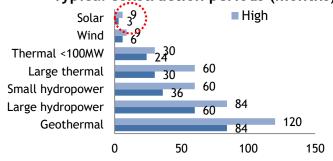
...and Afghanistan Global Horizontal Irradiance (GHI) is above 5 kWh/m²

Horizontal irradiation in Afghanistan



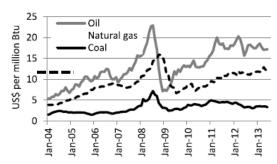
Solar power can be built in 3-9 months vs. 3-10 years for thermal, hydro & geothermal...

Typical construction periods (months)



....and many countries need to diversify away from a dependency on HFO and fossil fuels

Evolution of oil, gas and coal prices since 2004





But investment in solar PV is slow...

- Lack of market scale
- Lack of competition
- High transaction costs
- High perceived risk and cost of capital
- Limited institutional capacity

Scale, standardization & competition are needed

Case Study: Dramatic tariff reductions have been achieved in South Africa

Large, repeat allocation Capacity build-up

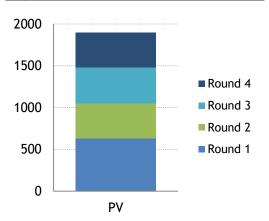
Strong competition Tariff decrease

Inclusive Framework Proven bankable

Program expansion

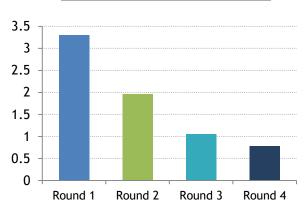
High investor interest

Capacity allocated per round (MW)



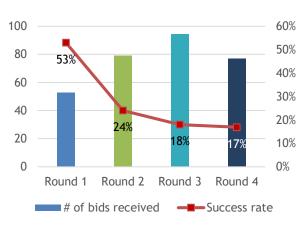
√ +1,900 MW of solar PV power

Tariffs per round (ZAR/kWh)



✓ Tariff drop of -68% for PV projects over the 3 rounds

Number of received bids and success rate (includes wind)



✓ Surge in investor interest and increasing selectivity in bidders afforded





The WBG Solution: A "One-Stop-Shop" offering



Scaling Solar is a "one-stop-shop" for Governments to rapidly mobilize competitive privately funded grid connected solar projects within 2 years of engaging our team.

<u>Scaling Solar brings together several World Bank Group services under a single engagement:</u>

- ✓ **Advice** to assess the right size and location for power plants in grid.
- ✓ Simple and rapid **tendering** to ensure strong competition from committed industry players.
- \checkmark Standardized, balanced **project documents** to eliminate drafting and negotiation delays.
- ✓ Competitive financing and insurance attached to tender and available to all bidders.
- ✓ Risk management and credit enhancement products to lower financing costs and deliver lower tariffs.



What's new about this?

Delivery Speed & Efficiency

- ✓ Templates (RFQ, RFP, PPA, GSA) support rapid & low cost tender preparation
- Balanced docs and stapled financing avoid negotiation

Optimization & Risk Mgmt

- ✓ Site selection & development minimize uncertainty and optimize for grid
- ✓ Stapled PRI and offtaker credit enhancement lower risks & so tariffs

Economies of Scale

- ✓ Standardization across multiple countries creates large regional market
- Delivers benefits of economies of scale



Developers that have already bid on Scaling Solar tenders



















































How will it work? Scaling Solar's 5 Steps



- Several WBG instruments brought together <u>under a single product offering</u>.
- Client governments would engage in a single mandate to access the "one-stop-shop".

1

Project Preparation

Bid Preparation

3

Tender Process & Award

4

Financial Close

5

Construction & Operation

- Technical and economic analysis for optimal size and location of PV plants
- Site investigation
- Legal & regulatory analysis

Template tender documents

- Template project documents
- Attachment of stapled financing, insurance and credit enhancement

- Request for qualification
- Bidder consultation
- Request for proposals
- Proposal review and award
- Signing of project documents

- Finalization of equipment, construction and operation contracts
- Final project approvals
- Finalization of loan agreements, insurance and risk management

- Construction
- Commissioning
- Operation

6 to 15 months

6 - 9 months

6 -12 months





The tendering process: What are the "standardized documents"?

Engagement Letter & ToRs for specialized **Consultants**



- Government signs a Letter of Engagement with IFC's Advisory **Services**
- A World Bank Group team is put in place
- Specialized consultants are hired based on existing Terms of References

Power **Purchase** Agreement & Government Support Agreement



- Documents designed as fair, balanced and bankable
- Fundamental risk allocation documents have already been prepared by the World **Bank Group with** support of Linklaters and tested through internal approvals and **Norton Rose** independent review

Pre-Qualification Document & Request for **Proposals**



 Tendering documents are ready and have been designed to attract top tier developers and investors

Letter of Interest and Indicative financing terms



- Indicative terms for debt financing as well as terms for Partial Risk Guarantees are available and have been through preliminary internal approvals
- ⇒Critical for this set of documents to be utilized in their template forms to achieve scaled, competitive solar power within 2 years





What are the benefits?

1. For Governments:

- ✓ Speed
- ✓ Customized process
- ✓ Certainty
- √ Competitive fixed-rate tariffs
- 2. For Project Developers:
- ✓ Market creation
- ✓ Reduced development time
- ✓ Level playing field

3. For Donors:

- ✓ Reach
- ✓ Leverage
- ✓ Impact



Afghanistan - Status Update

- Financial Advisory Services Agreement Signed on September 12, 2018
- Strengthening government capacity to develop a land bank of suitable
 PV solar sites based on consistent criteria reflecting good international practice
 - Learning by doing leveraging site selection of pilot 40MW transaction
 - IFC/WB joint effort to assist in site selection WB GIS tool with embedded filter criteria to screen prospective sites in Kabul area/ identify potential sites in Herat; IFC support for on-site visits/ criteria checklist to validate GIS assessments jointly with stakeholders
 - Going forward request by Arazi to assist in codifying site parameters in form of Guidelines/ Directive for Arazi regional teams
 - Two sites visited by the Consultant and Gov't Team.
- Improving coordination in implementation of projects MoF leadership in convening Technical Committee
- Developing bankable risk allocation comparative review of international practice and successful pilots to date in Afghanistan
- Development of outreach strategy to engage international investors/ improved competition





Questions or Interest? Please contact us

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